



## Cookson Electronics

A Division of Cookson Group plc

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Revised 7/21/04  
Replaces 7/01/04  
Printed 1/25/05  
MSDS ID: FT002-1

# MATERIAL SAFETY DATA SHEET

Cookson Electronics  
Assembly Materials

4100 Sixth Avenue  
Altoona, PA 16602

(814) 946-1611  
(814) 944-8094 fax

www.cooksonelectronics.com

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: TIN/LEAD SOLDER

MANUFACTURER'S NAME: COOKSON ELECTRONICS ASSEMBLY MATERIALS GROUP  
ADDRESS: 4100 6th AVENUE

ALTOONA, PA 16602

TRANSPORT EMERGENCY #: CHEMTREC: 1-800-424-9300

BUSINESS PHONE: 1-814-946-1611

## 2. INGREDIENT AND EXPOSURE LIMIT INFORMATION

CHEMICAL NAME	CAS #	% W/W	OSHA PEL - TWA
LEAD	7439-92-1		0.05mg/m3
TIN	7440-31-5		2.0mg/m3

SEE PRODUCT LABEL FOR EXACT METAL COMPOSITION OF PRODUCT.

## 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: MODERATE EYE IRRITANT. WILL NOT BURN. TOXIC BY  
INHALATION. GASTROINTESTINAL TRACT IRRITANT. RESPIRATORY  
TRACT IRRITANT. CAUSES SKIN IRRITATION.

### HMIS RATING SYSTEM:

Health: 2 ; Flammability: 0 ; Reactivity: 0 ; Protection: B

### NFPA RATING SYSTEM:

Health: 2 ; Flammability: 0 ; Reactivity: 0

ROUTES OF ENTRY: INHALATION; INGESTION; EYE CONTACT

TARGET ORGANS: BLOOD; DIGESTIVE TRACT; KIDNEYS; RESPIRATORY SYSTEM;  
SKIN; HEART; EYES

MEDICAL CONDITIONS AGGRAVATED: DIGESTIVE TRACT DISEASE; KIDNEY DISEASE

### IMMEDIATE (ACUTE) SYMPTOMS OVER-EXPOSURE BY ROUTE OF EXPOSURE:

INHALATION: CAN CAUSE MODERATE RESPIRATORY IRRITATION, DIZZINESS,  
WEAKNESS, FATIGUE, NAUSEA AND HEADACHE.

EYES: CAN CAUSE MODERATE IRRITATION, TEARING AND REDDENING, BUT  
NOT LIKELY TO PERMANENTLY INJURE EYE TISSUE.

SKIN CONTACT: CAN CAUSE SLIGHT IRRITATION.

INGESTION: IRRITATING TO MOUTH, THROAT, AND STOMACH. CAN CAUSE  
ABDOMINAL DISCOMFORT, NAUSEA, VOMITING AND DIARRHEA.

### LONG TERM (CHRONIC) HEALTH EFFECTS:

CARCINOGENICITY: IARC CLASSIFIES LEAD AND SOME LEAD COMPOUNDS AS 2B CARCINOGENS



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## 3. HAZARDS IDENTIFICATION (Cont.)

TO HUMANS. AGCIH LISTS LEAD AS A "A3" (ANIMAL CARCINOGEN  
WITH UNKNOWN RELEVANCE TO HUMANS)  
(ANIMAL CARCINOGEN WITH UNKNOWN RELEVANCE TO HUMANS).  
SEE SECTION 11 OF THIS MSDS FOR ADDITIONAL INFORMATION.

REPRODUCTION: SEE SECTION 11 OF THIS MSDS.  
MUTAGENICITY: SEE SECTION 11 OF THIS MSDS.

## 4. FIRST AID MEASURES

SKIN EXPOSURE: WASH WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND  
LAUNDRY. GET MEDICAL ATTENTION IF IRRITATION DEVELOPS OR  
PERSISTS.  
EYE EXPOSURE: FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 20 MINUTES  
RETRACTING EYELIDS OFTEN. TILT THE HEAD TO PREVENT CHEMICAL  
FROM TRANSFERRING TO THE UNCONTAMINATED EYE. GET IMMEDIATE  
MEDICAL ATTENTION.  
INHALATION: REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, HAVE A  
TRAINED INDIVIDUAL ADMINISTER OXYGEN. IF NOT BREATHING, GIVE  
ARTIFICIAL RESPIRATION AND HAVE A TRAINED INDIVIDUAL  
ADMINISTER OXYGEN. GET MEDICAL ATTENTION IMMEDIATELY.  
INGESTION: SEEK MEDICAL ATTENTION IMMEDIATELY.  
NOTES TO DOCTOR: NO ADDITIONAL FIRST AID INFORMATION AVAILABLE

## 5. FIRE FIGHTING MEASURES

FLAMMABILITY SUMMARY: NOT COMBUSTIBLE  
FLASH POINT: N/A  
AUTOIGNITION TEMPERATURE: N/E  
EXPLOSIVE LIMITS % IN AIR: N/E

FIRE FIGHTING METHODS: WILL NOT BURN, NO SPECIAL INSTRUCTIONS AVAILABLE.  
USE METHODS APPROPRIATE FOR SURROUNDING  
MATERIALS.

HAZARDOUS COMBUSTION PRODUCTS: METAL FUMES; TOXIC FUMES.

## 6. ACCIDENTAL RELEASE MEASURES

PRECAUTIONS AND EQUIPMENT: EXPOSURE TO THE SPILLED MATERIAL MAY BE IRRITATING  
OR HARMFUL. FOLLOW PERSONAL PROTECTIVE EQUIPMENT  
RECOMMENDATIONS FOUND IN SECTION VIII OF THIS  
MSDS.

METHODS FOR CLEAN-UP: WEAR COMPLETE AND PROPER PERSONAL PROTECTIVE  
EQUIPMENT FOLLOWING THE RECOMMENDATION OF SECTION  
VIII GATHER AND STORE IN A SEALED CONTAINER



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## 6. ACCIDENTAL RELEASE MEASURES (Cont.)

PENDING A WASTE DISPOSAL EVALUATION. DO NOT USE  
BROOM OR AIR CLEANING ETC.

## 7. HANDLING AND STORAGE

HANDLING MEASURES: HARMFUL OR IRRITATING MATERIAL. AVOID CONTACTING AND AVOID  
BREATHING THE MATERIAL. USE ONLY IN A WELL VENTILATED  
AREA.

AS WITH ALL CHEMICALS, GOOD INDUSTRIAL HYGIENE PRACTICES  
SHOULD BE FOLLOWED WHEN HANDLING THIS MATERIAL. AVOID  
CONTACT WITH MATERIAL, AVOID BREATHING DUSTS OR FUMES, USE  
ONLY IN A WELL VENTILATED AREA. WASH THOROUGHLY AFTER  
HANDLING; WASH HANDS BEFORE EATING; DO NOT GET IN EYES,  
ON SKIN AND CLOTHING; MINIMIZE DUST GENERATION AND  
ACCUMULATION; REMOVE CONTAMINATED CLOTHING AND WASH  
BEFORE REUSE.

STORAGE MEASURES: NO SPECIAL REQUIREMENTS  
STORE IN A TIGHTLY CLOSED CONTAINER; KEEP AWAY FROM FOOD  
AND DRINKING WATER. STORE IN A COOL DRY PLACE; KEEP AWAY  
FROM HEAT, SPARKS, AND FLAME

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

ENGINEERING MEASURES: USE LOCAL EXHAUST VENTILATION OR OTHER ENGINEERING  
CONTROLS TO MINIMIZE EXPOSURES AND MAINTAIN OPERATOR  
COMFORT.  
ENGINEERING CONTROLS MUST BE DESIGNED TO MEET THE  
OSHA CHEMICAL SPECIFIC STANDARD IN 29 CFR 1910.  
VENTILATION IS REQUIRED TO MAINTAIN OPERATOR EXPOSURE  
BELOW PUBLISHED EXPOSURE LIMITS. USE PROCESS  
ENCLOSURES, LOCAL EXHAUST VENTILATION, OR OTHER  
ENGINEERING CONTROLS TO CONTROL AIRBORNE LEVELS BELOW  
RECOMMENDED EXPOSURE LIMITS.

RESPIRATORY PROTECTION: RESPIRATORY PROTECTION MAY BE REQUIRED TO AVOID  
OVEREXPOSURE WHEN HANDLING THIS PRODUCT. GENERAL OR  
LOCAL EXHAUST VENTILATION IS THE PREFERRED MEANS OF  
PROTECTION. USE A RESPIRATOR IF GENERAL ROOM  
VENTILATION IS NOT AVAILABLE OR SUFFICIENT TO  
ELIMINATE SYMPTOMS.  
FOLLOW A RESPIRATORY PROTECTION PROGRAM THAT MEETS 29  
CFR 1910.134 AND ANSI Z88.2 REQUIREMENTS WHENEVER  
WORK PLACE CONDITIONS WARRANT THE USE OF A  
RESPIRATOR. WEAR A NIOSH APPROVED RESPIRATOR IF ANY  
EXPOSURE IS POSSIBLE.

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## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION (Cont.)

EYE PROTECTION: WEAR CHEMICALLY RESISTANT SAFETY GLASSES WITH SIDE SHIELDS WHEN HANDLING THIS PRODUCT. DO NOT WEAR CONTACT LENSES.

SKIN PROTECTION: WEAR GOGGLES AND A FACE SHIELD  
WEAR PROTECTIVE GLOVES. INSPECT GLOVES FOR CHEMICAL BREAK-THROUGH AND REPLACE AT REGULAR INTERVALS. CLEAN PROTECTIVE EQUIPMENT REGULARLY. WASH HANDS AND OTHER EXPOSED AREAS WITH MILD SOAP AND WATER BEFORE EATING, DRINKING, AND WHEN LEAVING WORK  
WHERE CONTACT IS LIKELY, WEAR CHEMICAL RESISTANT GLOVES, A CHEMICAL SUIT, RUBBER BOOTS, AND CHEMICAL SAFETY GOGGLES PLUS A FACE SHIELD

CONTROL PARAMETERS: -----ACGIH EXPOSURE LIMITS-----

CHEMICAL NAME	TLV-TWA	STEL	CEILING
LEAD	0.05 mg/m3 TWA		
TIN	2 mg/m3 TWA		

## 9. PHYSICAL AND CHEMICAL PROPERTIES

COLOR: GREY  
ODOR: NONE  
pH: N/A  
SOLUBILITY IN WATER: NEGLIGIBLE; 0-1%

OTHER PHYSICAL AND CHEMICAL PROPERTIES DEPEND ON ALLOY COMPOSITION.

## 10. STABILITY AND REACTIVITY

DECOMPOSITION PRODUCTS: METAL FUMES; TOXIC FUMES.

INCOMPATIBLE MATERIALS: PEROXIDES; STRONG ACIDS; STRONG OXIDIZING AGENTS; STRONG REDUCING AGENTS; ACIDS; CHLORINE; MOISTURE; STRONG ALKALIES

CONDITIONS TO AVOID: NONE KNOWN  
CONTAMINATION; CONTACT WITH AIR. CONTACT WITH WATER

## 11. TOXICOLOGICAL INFORMATION

INHALATION AND INGESTION: INGESTION OF DUST OR FUME MUST BE AVOIDED.

LEAD: LEAD IS TOXIC AND CUMULATIVE, AFFECTING THE KIDNEYS AND NERVOUS SYSTEM. SYMPTOMS INCLUDE ANEMIA, INSOMNIA, WEAKNESS, IRRITABILITY, CONSTIPATION AND STOMACH PAINS.

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## 11. TOXICOLOGICAL INFORMATION (Cont.)

TIN: CONSULT OSHA LEAD STANDARD 1910.1025.  
TIN IS NOT REGARDED AS TOXIC BUT EXCESSIVE EXPOSURE CAN  
CAUSE FEVER, NAUSEA, STOMACH CRAMPS OR DIARRHEA. DUST OR  
FUME MAY CAUSE IRRITATION OF THE SKIN AND MUCOUS  
MEMBRANES AND MAY RESULT IN A BENIGN PNEUMOCONIOSIS

## 12. ECOLOGICAL INFORMATION

OVERVIEW: ECOLOGICAL HAZARD. IN HIGH CONCENTRATIONS, THIS PRODUCT MAY  
BE DANGEROUS TO PLANTS AND/OR WILDLIFE.

## 13. DISPOSAL CONSIDERATIONS

WASTE DESCRIPTION: RETURN TO SUPPLIER TO BE RECYCLED FOR METAL UNIT VALUE.  
SPENT OR DISCARDED MATERIAL IS PROBABLY A HAZARDOUS WASTE.  
DISPOSAL METHODS: DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE, LOCAL OR  
PROVINCIAL LAWS AND REGULATIONS.

## 14. TRANSPORT INFORMATION

SHIPPING BASIC DESCRIPTION: DOT & IATA: NOT RESTRICTED UNLESS IN FINE  
PARTICLE SIZE LESS THAN 0.004 INCHES IN DIAMETER.  
DEPENDS ON ALLOY. CONSULT LABEL OR MANUFACTURER  
FOR ADDITIONAL INFORMATION.

## 15. REGULATORY INFORMATION

TSCA STATUS: ALL COMPONENTS OF THIS PRODUCT ARE LISTED ON THE TSCA INVENTORY  
OF EXISTING CHEMICAL SUBSTANCES.  
REGULATED CHEMICALS:

CHEMICAL NAME		REGULATION
LEAD	7439-92-1	SARA 313
LEAD	7439-92-1	CA PROP 65

## 16. OTHER INFORMATION

The information contained herein is based on data considered accurate.  
However, no warranty is expressed or implied regarding the accuracy of these



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### 16. OTHER INFORMATION (Cont.)

data or the results to be obtained from the use thereof. Additionally, Alpha Metals, Inc. assumes no responsibility for injury to the vendee or third persons proximately caused by the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.